National Institute of Environmental Health Sciences

Air quality and pediatric asthma-related emergencies (article)

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Abstract:

BACKGROUND: Previous studies suggest a relationship between air pollutants, aeroallergens, and asthma exacerbations. OBJECTIVE: To simultaneously examine the role of seasonality, air quality, aeroallergens, and climate on asthma-related pediatric emergency department (ED) visits. METHODS: A retrospective 4-year study of asthma-related ED visits was conducted. RESULTS: September had the highest number of visits ($p < 0.01$). There were lower temperatures and precipitation ($p < 0.01$) and higher tree and weed pollen levels (p Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 0.05) on days with more visits (p Euro Surveillance (Bulletin Europeen Sur Les Maladies Transmissibles; European Communicable Disease Bulletin) 0.05), while grass pollen, mold, ozone, NO2, and PM2.5 levels showed no significant differences. Conclusions: Asthma-related visits were associated with aeroallergens and climatic factors and not air-quality factors.

Source: http://dx.doi.org/10.1080/02770900701751666

Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Air Pollution, Precipitation, Temperature

Air Pollution: Allergens, Ozone, Particulate Matter, Other Air Pollution

Air Pollution (other): NO2

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

United States

Health Impact:

specification of health effect or disease related to climate change exposure

Morbidity/Mortality, Respiratory Effect, Other Health Impact

Respiratory Effect: Asthma

Other Health Impact: emergency department admissions

Population of Concern: A focus of content

Population of Concern: ☑

populations at particular risk or vulnerability to climate change impacts

Children

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified